

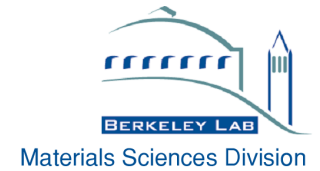
Materials Sciences Division Safety Committee Meeting

May 11, 2010



Materials Sciences Division

Opening Remarks



- ◆ Miquel Salmeron, Director of Materials Sciences Division
- ◆ Mark Alper, Deputy Division Director, Materials Sciences Division

Agenda



Materials Sciences Division

- ◆ MSD Safety Committee
 - ◆ Membership
- ◆ Electrical Safety Issues
 - ◆ Guest speaker: Keith Gershon-Electrical Safety, Subject Matter Expert
- ◆ Recent incidents/injuries
 - ◆ Sprinkler release in Foundry clean room
 - ◆ Lithium reaction/unauthorized lithium purchase
 - ◆ Two repetitive trauma (ergonomic) injuries
- ◆ Other Topics
 - ◆ Deterioration of SAA management in recent months–Paul Johnson
 - ◆ Continued availability of Viton gloves
 - ◆ New training for area leads
 - ◆ Repair/deactivation of unsafe electrical equipment
 - ◆ ^3He shortage

MSD Safety Committee — Membership & Liaisons



Materials Sciences Division

Chair and Deputy Chair:

Rick Kelly, Joel Ager

Building Managers:

Gilbert Torres (62, 66, 67),

John Turner (72),

Oliver Gessler (2, shared with Gil Torres)

MSD EHS Administrative Support:

Susan Waters

Electrical Safety Repairs:

Jim Severns (MSD)

MSD EH&S Technician:

Paul Johnson

Carleton Falzone

LBL Safety Advisory Committee (SAC) Rep

Erik Anderson

Liaisons:

EH&S Liaison to MSD:

Larry Mclouth

Waste Generator Assistant Liaison:

Howard Hansen (EHS)

Representative

Group

Joel Ager

Ager

Robert Sulc

Blackwell

Edith Bourret-Courchesne

Bourret-Courchesne

Ron Tackaberry

CXRO

Marca Doeff

DeJonghe / Doeff

Joe Wofford

Dubon

Steve Wu

Dynes

Alex Gray

Fadley

Jeff Beeman

Haller / EMAT

Kunihara Takei

Javey

Blandine Jerome

Jerome

Hyunyong Choi

Kaindl

Daniel Garcia

Lanzara

Zuzanna Lilienthal-Weber

Lilienthal-Weber

Michael Connolly

Molecular Foundry / Zuckerman

Paul Ashby

Molecular Foundry / Ogletree

Tracy Mattox

Molecular Foundry / Milliron

Bruce Harteneck

Molecular Foundry / Cabrini

Yi Liu

Molecular Foundry / Svec

David Prendergast

Molecular Foundry / Neaton

David Bunzow

Molecular Foundry / User Program

Doreen Ah Tye

NCEM

James Hinton

Orenstein

Joseph Lemberg

Ritchie

Sabine Maier

Salmeron

Yi Zhu

Schoenlein

Robert Baker

Somorjai

Grace Lau

Tomsia

Each LBNL-based research group in MSD, including each program in the Molecular Foundry, will designate a primary and backup representative to serve on the Safety Committee

MSD Safety Committee – Electrical Safety Issues



Materials Sciences Division

Guest Speaker – Keith Gershon

LBNL Electrical Safety Subject Matter Expert

kdgershon@lbl.gov x 4694

Reminder: Rules for LOTO/Energized Electrical Work



Materials Sciences Division

- **Lock out/tag out (LOTO) or energized electrical work can only be performed by people who have the required training and are authorized via an activity hazard document**
- **AHDs in place:**
 - Ion Implanter in B2**
 - Accelerator in B62**
- **AHDs in works:**
 - Salmeron Group**
 - CXRO Nanofab**
 - Division Electronics Tech**
 - Schoenlein group**

Near Misses and Accidents

The Foundry Clean Room Flood



Subcontractor hired to clean the clean room after construction.

Take home message: Don't let anyone work near the sprinklers without taking special precautions!

What would you do??

Near Misses and Accidents



Materials Sciences Division

Lithium Metal Event



- ◆ Metallic lithium purchased without required hazard review and AHD
- ◆ Unknown external heat source burned through top of container, allowing Li (apparently in air at the time) to react
- ◆ Someone placed damaged container/Li in nitrogen inert/dry box, where it was later discovered--N₂ storage is not appropriate for Li due to Li₃N formation

Near Misses and Accidents



Materials Sciences Division

Ergonomic Injuries Continue

- ◆ Two more repetitive trauma (ergonomic) injuries in MSD
- ◆ Review of workstations of selected students and post docs will be performed in May and June

Materials Safety Bulletin June 1, 2009

Materials Safety

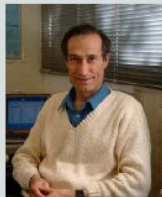
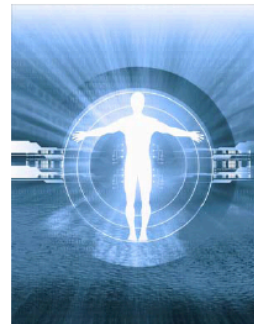
A Message from Rick Kelly

Recognize New Ergonomic Hazards When Your Work Changes

Relatively small and apparently innocuous changes in work can lead to new hazards and serious injuries.


Recently, a Division staff scientist developed a serious and painful ergonomic injury due, in part, to an increase of computer use. His pain and disability continues despite physical therapy. Changes in computer use are common when researchers spend more time writing articles, preparing presentations and completing dissertations.

Other injuries involve use of lab equipment. A couple of years ago, a student suffered a very severe ergonomic injury due to an increase in physical work-load after the departure of a co-worker. Working on a large vacuum system, he repeatedly removed and reinstalled hundreds of bolts using hand tools. In addition, he performed a great deal of fine manipulative work under a binocular microscope. His injury required months of physical and electrical stimulation therapy and his disability was substantial.



The take-home message here is:

1. Make a conscious effort to recognize when even minor changes in work may introduce new hazards.
2. Report physical pain related to cumulative trauma (ergonomic pain) immediately.



MSD Safety Committee

SAA Inspection Finding

Paul Johnson
MSD ES&H Technician



SAA Management



Materials Sciences Division

- Keep all non-SAA related matter out
- No unlabeled waste should be in the SAA
- Hazardous waste labels should be completely filled out
- House Keeping
- Safety Glasses should be worn when entering labs without exemptions
- Any “empty daily” containers should be emptied at the end of each day
- Waste containers should have covers, caps or lids
- Waste accumulation logs should be kept
- Sharps containers should have any “bio-waste” labeling removed or obscured
- SAA label should have a current user and correct information

SAA Management



Materials Sciences Division

Important Things to Remember

- Completely fill out label
 - Name
 - Building
 - Office Location
 - Phone Number
- Complete description of waste
- SAA start date in correct location
- All hazardous properties marked

HAZARDOUS WASTE	
HANDLE WITH CARE!	
Generator <u>Chan Ho Yi</u>	Phone # <u>ext. 5886</u>
Building <u>85</u>	Room <u>218</u>
Contents <u>1M hydrochloric acid, aqueous solution, contaminated with heavy metals</u>	
SAA start date <u>9/26/03</u>	Hazardous properties Check all that apply
WAA receipt or accumulation start date* _____	<input checked="" type="checkbox"/> Toxic
	<input checked="" type="checkbox"/> Corrosive
	<input type="checkbox"/> Ignitable
	<input type="checkbox"/> Reactive
	<input type="checkbox"/> Other _____
HAZARDOUS WASTE HANDLING FACILITY USE ONLY	
HWHF receipt date _____	
Disposal requisition # _____	
Sample analysis # _____	
<input type="checkbox"/> Solid	
<input checked="" type="checkbox"/> Liquid	
<input type="checkbox"/> Gas	
*Receipt Date from SAA or Accumulation Start Date in the WAA	
Berkeley Laboratory 1 Cyclotron Rd., Berkeley, CA 94720	

These may seem like simple things, but too many times these are overlooked.

SAA Management

SAA Label

- Current SAA manager name
- User building and room
- Telephone extension
- Type of waste

You can get these labels from

Paul M Johnson or
Carleton Falzone



S A A

**SATELLITE ACCUMULATION AREA
FOR HAZARDOUS WASTE**

RESPONSIBLE PARTY:

NAME _____

BLDG/ROOM _____

EXTENSION _____

TYPE OF WASTE _____

**DO NOT ADD WASTE TO THIS SAA WITHOUT PRIOR
AUTHORIZATION FROM THE RESPONSIBLE PARTY**

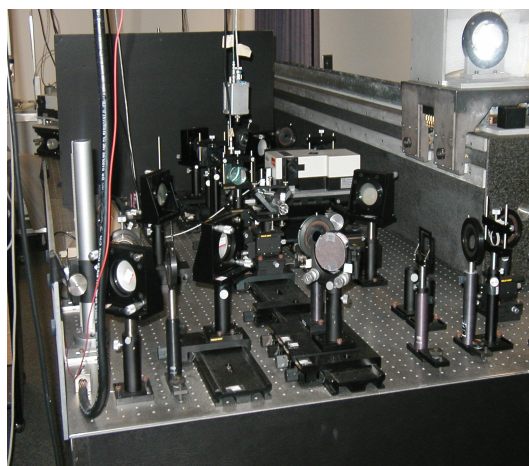
(Questions: Call 2145 Waste Compliance Unit 45251)

LAB-CHT 408-7004

SAA Management

Housekeeping

- Keep bench tops clear
- Keep walkways and exits free of obstructions
- Don't block electrical panels
- Keep laser bench tops free of clutter
- Keep fume hoods clean and free of clutter



Past Inspection Findings

- Incomplete labeling: 4
- Out date waste (Past 6 months): 2
- Non-SAA objects in SAA: 1
- No hazardous waste labels: 1
- Non SAA related findings: 2

We can and have to do better!!

SAA Management



Materials Sciences Division

If you have or need

- Hazardous Waste Labels
- SAA labels
- Chemical Barcodes
- Nano labels
- Waste related questions
- Setting up an SAA
- Any Safety related questions

Call: Paul Johnson x5810

Carleton Falzone x7679

Viton Gloves



Materials Sciences Division

- **Division office is stocking Viton rubber gloves, only gloves that will work for dichloromethane / methylene chloride**
- **Let Paul or Carleton know if you need some of these gloves--sizes from very small to huge**



Implementation of Area Lead Approach



Materials Sciences Division

- **New Training requirement for area leads: EHS 0042**

The supervisor must ultimately approve the JHAs and authorize work!

Repair of Electrical Equipment Deemed Unsafe



Materials Sciences Division

- ◆ Electrical equipment that has been inspected and deemed “unsafe” must be repaired or taken out of service within 90 days.
- ◆ See provided list of unsafe equipment
- ◆ Most repairs can be done by Jim Severns from MSD
- ◆ If Jim can not repair it, it may have to be disposed of

Shortage of ^3He



Materials Sciences Division

- ^3He needed in DOE complex